

SAUDER SCHOOL OF BUSINESS
THE UNIVERSITY OF BRITISH COLUMBIA
BAIT 504 - Business Database Technology

Period Three 2004

Course Outline

Instructor: William Tan (Angus 654, 822-9571, william.tan@ubc.ca)

Office Hours: To be arranged on first day of class.

Prerequisite: BAIT 502

1. Course Description

This course deals with the principles of database management and their application in organizations. The material is dealt with from the point of view of the user and the database administrator rather than the technical specialist who develops database software.

It begins with a very brief history and the basic principles of the database approach. It then introduces the theoretical models that underlie the field (relational and object-oriented data models). Each student will design and implement a database application using the relational data model and the SQL query language as well as the object-oriented data model and the ODQL query language. In addition, students will learn something about the internal workings of the relational database management systems. Oracle's RDBMS Server 8.x database management system and Computer Associate's Jasmine Object-Oriented database management system (version 1.2) will be used to gain the hands-on experience.

Finally, it discusses some recent developments and applications of the database area.

2. Course References

The following text book can be purchased from the UBC bookstore:

Peter Rob and Carlos Coronel. *Database Systems, Design, Implementation and Management*. Fifth Edition, Course Technology, 2002.

(Used copies may be available from the bookstore).

In addition, the set of slides to be used in the lecture can be downloaded from the WebCT site.

For assignments 1 and 3, the following Oracle references are available in the David Lam library for a 2 hours loan for students who wanted additional references.

- Cronin, D.J., *Mastering Oracle*. Hayden Books, 1989.
- Hursch, J.L., and Hursch, C.J., *Working With Oracle*. Version 6.0. Windcreat Books, 1989.
- Van der Lans, R.F., *The SQL Guide to Oracle*. Addison-Wesley, 1992.

Please note that (1) you only need one of the references -- see course schedule for more details, and (2) the van der Lans book should be available in bookstores that sell computer books. There are also tons of material on the Internet including the Oracle documentation at <http://oracle.commerce.ubc.ca/oracle>

3. Laboratory Fee

There is a \$23 lab fee that all BAIT 504 students have to pay. This fee is necessary in order to cover the software licence fee and other copyrighted materials. The fee will be collected in HA 12C (the Commerce Print shop) at the beginning of Period 3. Please insist on a receipt from the Commerce Print shop.

4. Assignments

There will be four assignments (see Grading Schedule and Course Schedule sections). All four assignments will require hands-on computer use. The software required for these assignments is installed in (or can be accessed from) the Commerce Microcomputer Laboratory (HA409). Students also have the option of installing Oracle and Jasmine in their home computers where possible (Jasmine requires Windows 2000 or Windows XP with NTFS file system installed).

Note that all assignments have to be done individually. Students are encouraged to discuss the assignments with each other. However, they have to implement and write up the assignments separately. Please also note that late assignments are NOT accepted.

5. Grading Schedule

Assignment 0	Change Oracle password	0%
Assignment 1	Database Design	10%
Assignment 2	Database Implementation	20%
Assignment 3	PL/SQL	10%
Assignment 4	Object-Oriented Data Model	20%
Final Exam		40%

You must pass the final to pass the course

6. Course Web Page and Discussion Forum

<https://www.elearning.ubc.ca/login/>

7. Course Schedule (subject to adjustments)

Date	Topic	References	Assignment
Apr 19	Introduction	Text: Ch.1.1 to Ch. 1.4 Mastering Oracle Ch.4,5 (Working with Oracle Ch.7,8)	
Apr 21	Relational Theory	Text: Ch.1.5	Ass0 – SQL Prep
Apr 26	Database Design	Text: Ch.6	
Apr 28	Database Design	Text Ch. 4	Ass1 – DB Design
May 3	Advanced SQL Introduction to 3GL Programming	Text: Ch.5 The SQL Guide Ch.9,11,14,15,19 (Mastering Oracle Ch.6) (Working With Oracle Ch.9)	
May 5	Procedural SQL	Text: Ch 5.	Ass2 – DB Implementation
May 10	Procedural SQL	Text: Ch.5	
May 12	Object-Oriented Data Model	Text: Ch.11	Ass3 – PL/SQL
May 17	Object-Oriented Data Model	Text: Ch. 11	
May 19	Transaction Management and Concurrency Control Data Warehousing	Text: Ch. 9 Text: Ch.13	Ass4 – OODB
Week 6			Final Exam

* **Note:** Monday, May 24, is a public holiday (Victoria Day).

* **Note:** There is an assignment due each week except the first week. The exact date each assignment is to be handed in will depend on the progress we make in class but sufficient time will be given for sure.